# THE COLUMBIA RIVER PROGRAM

## BUILDING PROJECTS AND PLANNING FOR THE FUTURE

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Washington State Dept of Ecology



## Presentation Overview

- Summary of Office of Columbia River and RCW 90.90
- Project update—what have we built and what are we building?
- Planning update—how much water supply do we need to develop for new growth?

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# Columbia River Basin Water Management Act - 2006

- Ecology directed to aggressively pursue development of new water supplies for both instream and out-of-stream uses
- Significant investment in new storage and conservation
  - Capital: authorization for bonds of up to $200 million
  - Operating: $2.1 million and 15 FTEs
- 2/3 of funds for study and construction of new storage
  - 1/3 of new storage for improving streamflows to benefit fish
  - 2/3 of new storage for new out-of-stream uses
- 1/3 of funds for conservation and all other water supply purposes
- Legislative reporting on conservation and future water supply and demand
- Pursue statutory directives – Develop water supplies for:
  - Alternatives to ground water in Odessa
  - Interruptible water right holders
  - Instream Benefits
  - Pending water right applicants
  - Long-term demand

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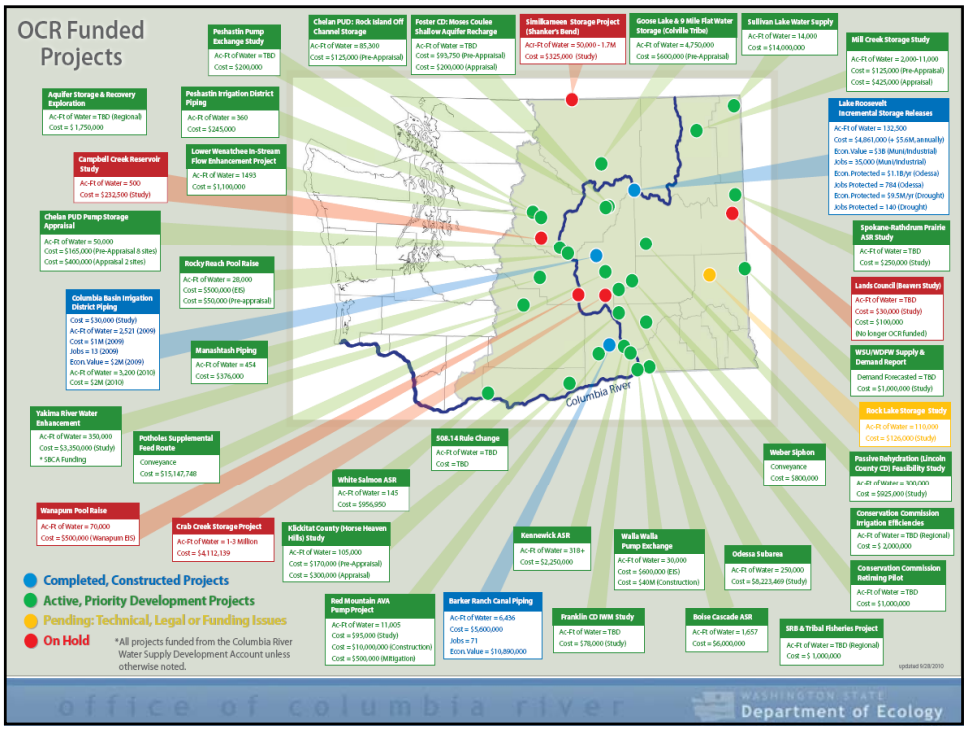


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# Project Update – Conservation

## INSTREAM FOCUS

**Barker Ranch** $5.6 million (2009-2010)

- 3.08 miles of pipeline replaced a leaky canal.
- The project allowed Barker Ranch to cut their current diversion from the Yakima River by 6,436 acre-feet. This water will be left in stream.
- The pipeline will deliver water to restored wetlands at Barker Ranch. These wetlands support at least 175 different species of birds as well as other terrestrial wildlife like coyotes, badgers, and deer.

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# Project Update – Conservation

## OUT-OF-STREAM FOCUS

**Columbia Basin Irrigation District** $1 million (2009)

Ecology committed $1 million (plus local matching funds) to implement piping projects that replaced 25,961 feet of open canal with pipe and 1,500 feet of canal lining. Saved water is moved to Odessa farms to replace declining groundwater supplies. Estimated water savings of 2,521.1 acre-feet as follows:

**East District: 17,140 ft of pipe, 1,973.4 AF/yr (Potholes East Canal)**

**South District: 8,821 ft of pipe, 336.7 AF/yr (Columbia River)**

**Quincy District: 1,500 ft of canal lining, 211 AF/yr (Columbia River)**

Ecology committed another $2 million in 2010 for continuing improvements expected to save another 3,200 ac-ft.

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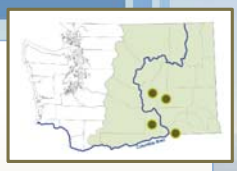
## Project Update – Pump Exch./Conveyances



**Potholes Supplemental Feed Route: ($10.8M /Conveyance)** The project will provide a more reliable source of water to the southern portion of the Columbia Basin Project by delivering water to Potholes Reservoir.

**Weber Siphon: ($800K / Conveyance)** A second siphon is needed at the Weber Siphon Complex to convey water from the Lake Roosevelt releases to the southern portion of the Odessa Subarea. It will eliminate a water delivery bottleneck at the East Low Canal and Interstate 90 near Moses Lake, WA.

**Walla Walla Pump Exchange: ($600K - $40 million/30,000 ac-ft)** Due in 2010, the EIS evaluates replacing Walla Walla River irrigation water with Columbia River water.

**Red Mountain AVA Pump Project: ($10.5M / 20,000 ac-ft)** The project will increase stream flows in a critical stretch of the Yakima River and provide 1,785 acres of vineyard irrigation to Red Mountain.

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## Project Update – Modification of Existing Storage

**Lake Roosevelt Incremental Storage Releases: ($4.8M /132K ac-ft)** The storage release will free up water to benefit municipal/industrial supply, replace Groundwater sources in the Odessa Subarea, interruptible water right holders and instream flows.

**Rocky Reach Modification: ($705K / 28,000 ac-ft)** Chelan PUD and Ecology are working together to investigate the potential for a incremental three feet pool raise at Rocky Reach Dam during the months of July, August, and part of September. The pool raise would generate 28,000 acre-feet of water for instream and out-of-stream use.

**Lake Sullivan Reoperation: ($14M/ 14,000 ac-ft)** Pend Oreille PUD and Ecology are working together to develop a 14,000 ac-ft reoperation project of an existing dam as part of a FERC license surrender process.

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# Project Update – ASR Investments

**White Salmon ASR: ($957K / 145 ac-ft)**
Store surplus winter water in aquifer to use during summer months to supplement City use and river flows.

**Kennewick ASR: ($1.05M / 318 ac-ft)** City of Kennewick would divert water in winter months then pump water to injections wells for storage to use later, along with instream benefit for the Columbia River.

**Boise Cascade ASR: ($4.5M / 1,657 ac-ft)** Funding will be used to build an ASR system in Walla Walla County, from water used for cooling a paper plant.

**Spokane-Rathdrum ASR: ($250K / TBD)** OCR is funding an analysis of the viability of aquifer storage and recovery in the Spokane Valley-Rathdrum Prairie (SVRP) aquifer.



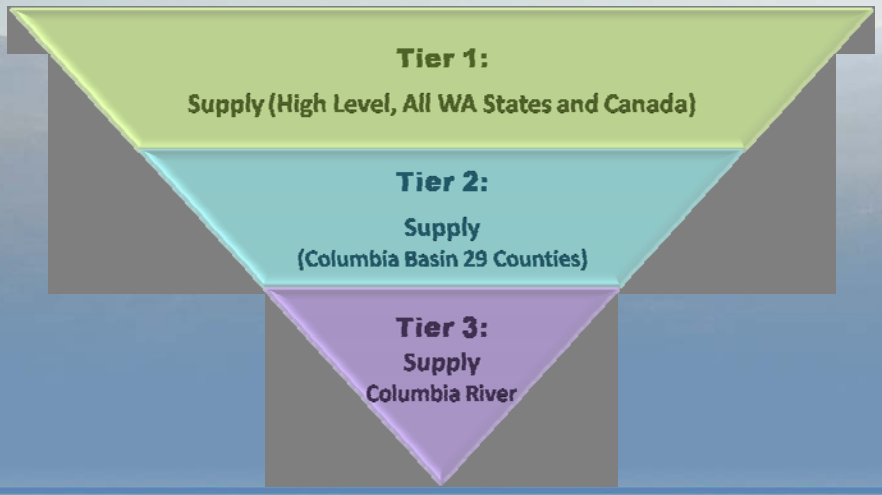
# Planning Update

## 2011 SUPPLY & DEMAND FORECAST (Approach)

- Out-of-stream goal is to develop supply in areas where growth is projected to occur
- Instream goal is to retime water to meet instream flows

# Planning Update

## 2011 SUPPLY & DEMAND FORECAST (Approach)

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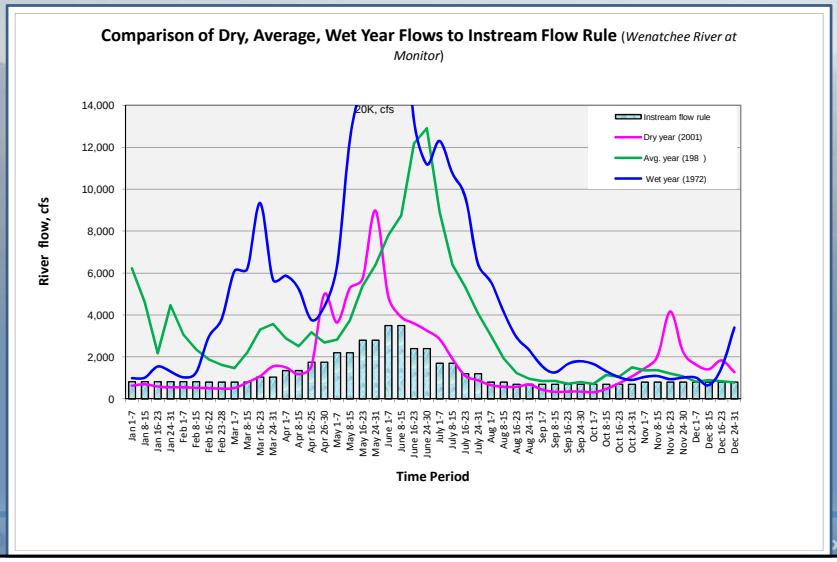
# Planning Update

## 2011 SUPPLY & DEMAND FORECAST (Supply)



# Planning Update

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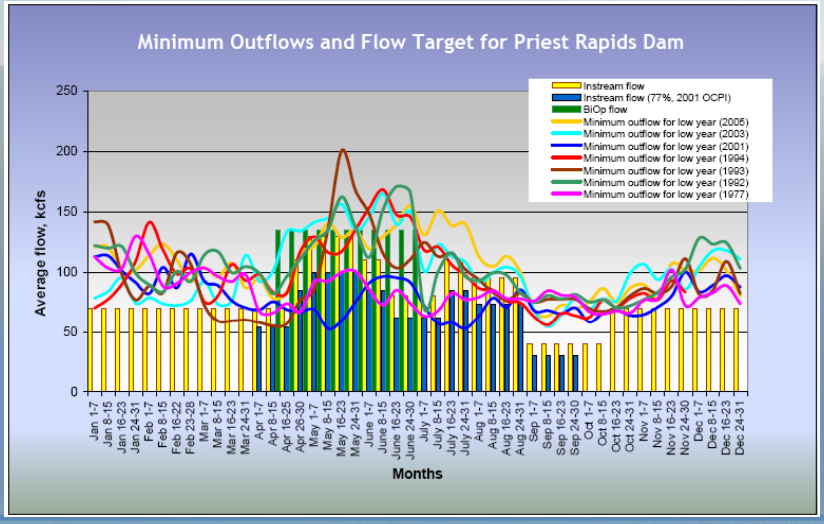


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# Planning Update

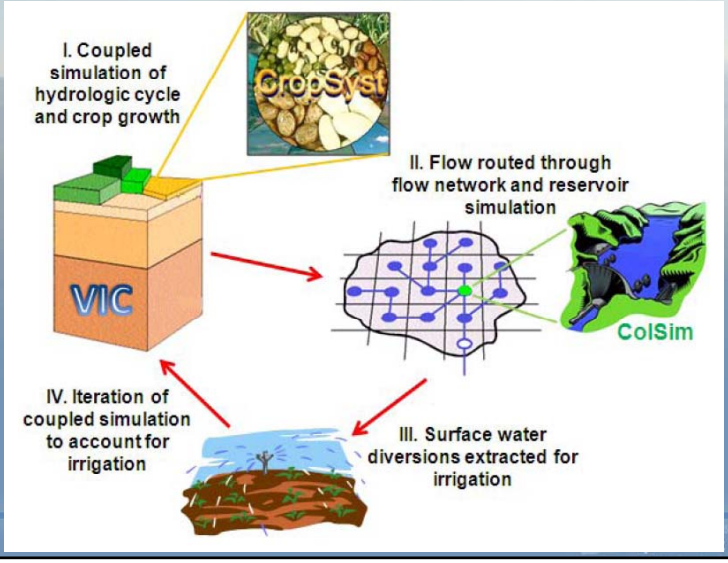
Priority Weight (Based on SaSI Stock Status)
= No Use
= 1 (Healthy)
= 2 (Depressed or Unknown)
= 3 (Critical)

## 2011 SUPPLY & DEMAND FORECAST (Instream Demand)

| Fish Species - SaSI Stock | Life Stage | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wenatchee Summer Chinook (Healthy) | Spawning and Incubation | | | | | | | | | | | | |
| | Rearing and Out-Migration | | | | | | | | | | | | |
| | Adult In-Migration | | | | | | | | | | | | |
| Chiwawa Spring Chinook (Depressed) | Spawning and Incubation | | | | | | | | | | | | |
| | Rearing and Out-Migration | | | | | | | | | | | | |
| | Adult In-Migration | | | | | | | | | | | | |
| Nason Creek Spring Chinook (Depressed) | Spawning and Incubation | | | | | | | | | | | | |
| | Rearing and Out-Migration | | | | | | | | | | | | |
| | Adult In-Migration | | | | | | | | | | | | |
| Little Wenatchee Spring Chinook (Critical) | Spawning and Incubation | | | | | | | | | | | | |
| | Rearing and Out-Migration | | | | | | | | | | | | |
| | Adult In-Migration | | | | | | | | | | | | |
| White River Spring Chinook (Critical) | Spawning and Incubation | | | | | | | | | | | | |
| | Rearing and Out-Migration | | | | | | | | | | | | |
| | Adult In-Migration | | | | | | | | | | | | |
| Wenatchee Summer Steelhead (Depressed) | Spawning and Incubation | | | | | | | | | | | | |
| | Rearing and Out-Migration | | | | | | | | | | | | |
| | Adult In-Migration | | | | | | | | | | | | |
| Wenatchee Sockeye (Healthy) | Spawning and Incubation | | | | | | | | | | | | |
| | Rearing and Out-Migration | | | | | | | | | | | | |
| | Adult In-Migration | | | | | | | | | | | | |
| Wenatchee Bull Trout (Unknown) | Spawning and Incubation | | | | | | | | | | | | |
| | Rearing or Sub-Adult Foraging | | | | | | | | | | | | |
| | Adult In-Migration | | | | | | | | | | | | |
| Wenatchee Coho (Unknown) | Spawning and Incubation | | | | | | | | | | | | |
| | Rearing and Out-Migration | | | | | | | | | | | | |
| | Adult In-Migration | | | | | | | | | | | | |

# Planning Update

## 2011 SUPPLY & DEMAND FORECAST (Out-of-Stream Demand)






# Planning Update

## 2011 SUPPLY & DEMAND FORECAST

- Course model runs to evaluate which variables create greatest change
- More limited fine model runs
- Selection of WRIA demands to be met through supply development

## Model Scenarios

**Climate Change**
- A1B projection
- B1 projection

**Quantity of Additional Water Resources**
- 100,000 ac-ft
- 500,000 ac-ft
- 1,000,000 ac-ft

**Spatial Distribution of Available Water Resources**
- Columbia River and dedicated tributary reserves only
- Columbia River and tributary sources

**Value of Water**
- Free
- $25/ac-ft/yr
- $100/ac-ft/yr
- $200/ac-ft/yr

**Trade Scenarios Options**
- Low
- Medium
- High

**Economic Growth**
- Low
- Medium
- High

# Next Steps

## 2011 SUPPLY & DEMAND FORECAST (Approach)

- Preliminary results (Winter 2010)
- Academic Peer Review (Winter 2010)
- External Stakeholder review (Spring 2010)
- Draft Report (Summer 2010)
- Final Report (November 2010)

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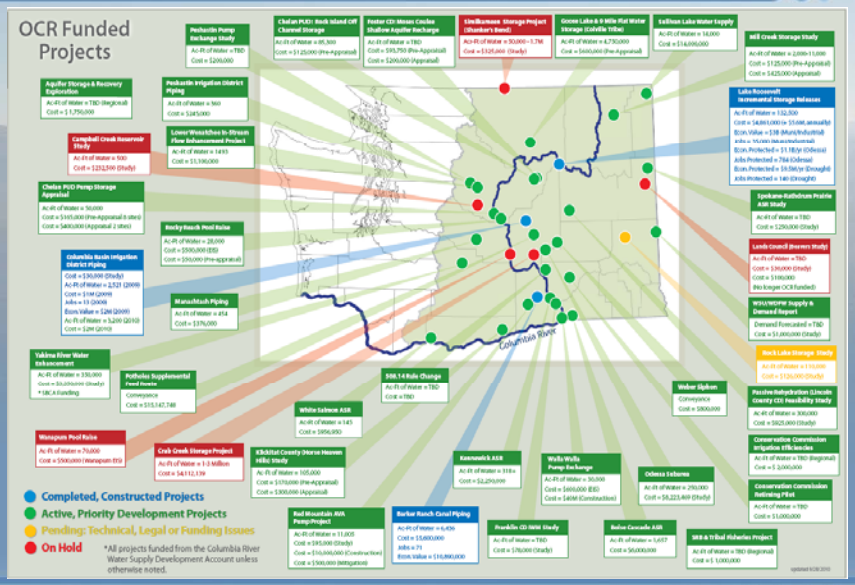
# Questions

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